

January 14, 2003

TO: Internal File

THRU: Wayne Western Senior Reclamation Specialist Team Lead

FROM: Joe Helfrich Biologist

RE: Final Bond Release for Sweet's Pond, Mountain Coal Company LLC, Gordon Creek 2,7 & 8 mine, C/007/016-BR02B

SUMMARY:

On October 23, 2002 the Division received an application for Phase three bond release for the Sweet's Pond. The Sweet's Pond Area, (.73 acres), is located at the mouth of Sweets Canyon in Gordon Creek approximately 20 road miles northwest of Price Utah. The area can be located on the Jump Creek 7.5 minute quadrangle map. There are no plans to reclaim the area. The pond is on private land and the landowner has requested the pond to be left as is for private use. This memo will address the biology section of the regulations for Phase three bond release.

TECHNICAL MEMO

TECHNICAL ANALYSIS:

ENVIRONMENTAL RESOURCE INFORMATION

Regulatory Reference: Pub. L 95-87 Sections 507(b), 508(a), and 516(b); 30 CFR 783., et. al.

VEGETATION RESOURCE FORMATION

Regulatory Reference: 30 CFR 783.19; R645-301-320.

Analysis:

The Sweets Pond area was used as a water truck filling area for the #2 mine as early as 1969. Surface disturbance included a small road to the North fork of Gordon creek approximately 100' in length. In early 1983 the Sweets Pond was constructed to provide water to the #7 mine and alleviate possible impacts to the stream.

Findings:

The information provided in the vegetation assessment and MRP is adequate to meet the requirements of this section of the regulations.

MAPS, PLANS, AND CROSS SECTIONS OF RESOURCE INFORMATION



Regulatory Reference: 30 CFR 783.24, 783.25; R645-301-323, -301-411, -301-521, -301-622, -301-722, -301-731.

Analysis:

Vegetation Reference Area Maps



The vegetation types and associated reference areas for the Sweets Pond are included on plate 9-1 of the MRP. The Sweets Pond is situated adjacent to mixed coniferous forest adjoining riparian and mountain grassland vegetative types. Section 3.5.5.5 page 3-58 of the MRP states that, "the Oak Shrubland Reference Area of the No. 2 mine will be used as the vegetative standard for success for the Sweets Pond area".

Findings:

The information provided in the MRP is adequate to meet the requirements of this section of the regulations.

RECLAMATION PLAN

REVEGETATION

Regulatory Reference: 30 CFR Sec. 785.18, 817.111, 817.113, 817.114, 817.116; R645-301-244, -301-353, -301-354, -301-355, -301-356, -302-280, -302-281, -302-282, -302-283, -302-284.

Analysis:

Revegetation: Timing

The disturbed areas associated with the Sweets Pond were seeded at the time the construction of the pond was complete, (approximately 1983). No additional seeding has occurred since that time. Therefore the seeded areas have been revegetated for approximately 20 years well in excess of the 10 year liability period. The success of revegetation has been evaluated over two consecutive years, (1996 and 1997), and again in 2000. Sampling parameters for the Sweets Pond site and associated reference area included cover and composition, woody species density, sample adequacy and statistical comparisons and diversity.

Revegetation: Standards For Success

Section 3.5.5.5 page 3-58 of the MRP states that "Vegetation success will be achieved when ground cover and density are not less than 90% of the approved success standard when tested at a 90% confidence interval". The total living cover for the Sweets Pond area was 54.50 % (Table 1-A), comprised of 69% grasses, 26% shrubs and 5% forbs (Table 1-B). Woody species density was 1,067 plants per acre (Table 1-C). Table 1-D includes three diversity indices, the average number of species per meter square was 3.1, the total diversity was 5.686 and the total number of species per quadrat was 12.

The total living cover for the reference area was 40.83% (Table 3-A) comprised of 73% grasses, 25% shrubs and 2% forbs (Table 3-B). Woody species density was 1,568 individuals per acre (Table 3-C). Table 3-D includes three diversity indices for the reference area, the average number of species per meter square was 2.2. Total diversity was 3.982 and the total number of species per quadrat was 11. Although the Sweets Pond and the reference area have dissimilar environments it probably seemed logical at the time to use the same reference area as the remaining 98% of the disturbed areas. The statistical analyses and qualitative assessments comparing the two areas indicates that they are very similar with respect to cover, composition, woody species density and diversity.

TECHNICAL MEMO

Findings:

The information provided in the vegetation assessment and MRP is adequate to meet the requirements of this section of the regulations.

RECOMMENDATIONS:

The phase three bond release application for the Sweets Pond area is recommended for approval.

O:\007016.GC2\FINAL\jchBR02B.doc